

WE CLAIM:

1. A device for providing power to a network-based device comprising:

a first circuit adapted to provide a differential voltage based on input signals of opposite polarity received from a first pair of network pathways or to contribute to the provisioning of a common voltage based on input signals of a first polarity received from the first pair of pathways; and

a second circuit adapted to supply the differential voltage based on input signals of opposite polarity received from a second pair of network pathways or to contribute to the provisioning of the common voltage based on input signals of a second polarity received from the second pair of pathways.
2. The device as in claim 1 wherein the first and second circuits comprise discrete devices.
3. The device as in claim 1 wherein the first and second circuits comprise integrated circuits.
4. The device as in claim 1 wherein the first and second circuits comprise diode bridges.
5. The device as in claim 1 further comprising a third circuit adapted to supply local power.

6. The device as in claim 5 wherein the local power comprises AC power.
7. The device as in claim 1 further comprising a fourth circuit adapted to provide power and communication signals from additional network pathways.
8. The device as in claim 7 wherein the communication signals comprise voice signals.
9. The device as in claim 7 wherein the communication signals comprise data signals.
10. The device as in claim 1 wherein the first polarity is a positive polarity and the second polarity is a negative polarity.
11. The device as in claim 1 wherein the first polarity is a negative polarity and the second polarity is a positive polarity.
12. The device as in claim 1 wherein the first and second pathways comprise LAN cable wires.
13. The device as in claim 1 wherein the first and second pathways comprise terminal connections.

14. A network-based device comprising:

a first circuit adapted to provide a differential voltage based on input signals of opposite polarity received from a first pair of network pathways or to contribute to the provisioning of a common voltage based on input signals of a first polarity received from the first pair of pathways; and

a second circuit adapted to supply the differential voltage based on input signals of opposite polarity received from a second pair of network pathways or to contribute to the supply of the common voltage based on input signals of a second polarity received from the second pair of pathways.

15. The network-based device as in claim 14 wherein the first and second circuits comprise discrete devices.
16. The network-based device as in claim 14 wherein the first and second circuits comprise integrated circuits.
17. The network-based device as in claim 14 wherein the first and second circuits comprise solid state devices.
18. The network-based device as in claim 14 wherein the first and second circuits comprise diode bridges.

19. The network-based device as in claim 14 further comprising a third circuit adapted to provide local power.
20. The network-based device as in claim 19 wherein the local power comprises AC power.
21. The network-based device as in claim 14 further comprising a fourth circuit adapted to provide power and communication signals from additional network pathways.
22. The network-based device as in claim 21 wherein the communication signals comprise voice signals.
23. The network-based device as in claim 21 wherein the communication signals comprise data signals.
24. The network-based device as in claim 14 wherein the first polarity is a positive polarity and the second polarity is a negative polarity.
25. The network-based device as in claim 14 wherein the first polarity is a negative polarity and the second polarity is a positive polarity.

26. The network-based device as in claim 14 wherein the first and second pathways comprise LAN cable wires.
27. The network-based device as in claim 14 wherein the first and second pathways comprise terminal connections.
28. The network-based device as in claim 14 wherein the device comprises a computer.
29. The network-based device as in claim 14 wherein the device comprises an IP telephone.
30. A method for providing power comprising:
- providing a differential voltage based on input signals of opposite polarity received from a first pair of network pathways or contributing to the provisioning of a common voltage based on input signals of a first polarity received from the first pair of pathways; and
- providing the differential voltage based on input signals of opposite polarity received from a second pair of network pathways or contributing to the provisioning of the common voltage based on input signals of a second polarity received from the second pair of pathways.

31. The method as in claim 30 further comprising providing local power.
32. The method as in claim 31 wherein local power comprises AC power.
33. The method as in claim 30 further comprising providing power and communication signals from additional network pathways.
34. The method as in claim 33 wherein the communication signals comprise voice signals.
35. The method as in claim 33 wherein the communication signals comprise data signals.
36. The method as in claim 30 wherein the first polarity is a positive polarity and the second polarity is a negative polarity.
37. The method as in claim 30 wherein the first polarity is a negative polarity and the second polarity is a positive polarity.
38. The method as in claim 30 wherein the first and second pathways comprise LAN cable wires.

39. The method as in claim 30 wherein the first and second pathways comprise terminal connections.

40. A device for providing power to a network-based device comprising:

a first circuit adapted to provide a differential voltage based on input signals of opposite polarity received from a first pair of network pathways or to contribute to the provisioning of a common voltage based on input signals of a first polarity received from the first pair of pathways;

a second circuit adapted to supply the differential voltage based on input signals of opposite polarity received from a second pair of network pathways or to contribute to the provisioning of the common voltage based on input signals of a second polarity received from the second pair of pathways;

a third circuit adapted to supply local power; and

a fourth circuit adapted to provide power and communication signals from additional network pathways.

41. The device as in claim 40 wherein the first and second circuits comprise discrete devices.

42. The device as in claim 40 wherein the first and second circuits comprise integrated circuits.
43. The device as in claim 40 wherein the first and second circuits comprise diode bridges.
44. The device as in claim 40 wherein the local power comprises AC power.
45. The device as in claim 40 wherein the communication signals comprise voice signals.
46. The device as in claim 40 wherein the communication signals comprise data signals.
47. The device as in claim 40 wherein the first polarity is a positive polarity and the second polarity is a negative polarity.
48. The device as in claim 40 wherein the first polarity is a negative polarity and the second polarity is a positive polarity.
49. The device as in claim 40 wherein the first, second and additional pathways comprise LAN cable wires.

50. The device as in claim 40 wherein the first, second and additional pathways comprise terminal connections.

51. A network-based device comprising:

a first circuit adapted to provide a differential voltage based on input signals of opposite polarity received from a first pair of network pathways or to contribute to the provisioning of a common voltage based on input signals of a first polarity received from the first pair of pathways;

a second circuit adapted to supply the differential voltage based on input signals of opposite polarity received from a second pair of network pathways or to contribute to the provisioning of the common voltage based on input signals of a second polarity received from the second pair of pathways;

a third circuit adapted to supply local power; and

a fourth circuit adapted to provide power and communication signals from additional network pathways.

52. The network-based device as in claim 51 wherein the first and second circuits comprise discrete devices.

53. The network-based device as in claim 51 wherein the first and second circuits comprise integrated circuits.
54. The network-based device as in claim 51 wherein the first and second circuits comprise diode bridges.
55. The network-based device as in claim 51 wherein the local power comprises AC power.
56. The network-based device as in claim 51 wherein the communication signals comprise voice signals.
57. The network-based device as in claim 51 wherein the communication signals comprise data signals.
58. The network-based device as in claim 51 wherein the first polarity is a positive polarity and the second polarity is a negative polarity.
59. The network-based device as in claim 51 wherein the first polarity is a negative polarity and the second polarity is a positive polarity.
60. The network-based device as in claim 51 wherein the first, second and additional pathways comprise LAN cable wires.

61. The network-based device as in claim 51 wherein the first, second and additional pathways comprise terminal connections.

62. A method for providing power comprising:

providing a differential voltage based on input signals of opposite polarity received from a first pair of network pathways or contributing to the provisioning of a common voltage based on input signals of a first polarity received from the first pair of pathways;

supplying the differential voltage based on input signals of opposite polarity received from a second pair of network pathways or contributing to the provisioning of the common voltage based on input signals of a second polarity received from the second pair of pathways;

supplying local power; and

providing power and communication signals from additional network pathways.

63. The method as in claim 62 wherein local power comprises AC power.

64. The method as in claim 62 wherein the communication signals comprise voice signals.
65. The method as in claim 62 wherein the communication signals comprise data signals.
66. The method as in claim 62 wherein the first polarity is a positive polarity and the second polarity is a negative polarity.
67. The method as in claim 62 wherein the first polarity is a negative polarity and the second polarity is a positive polarity.
68. The method as in claim 62 wherein the first, second and additional pathways comprise LAN cable wires.
69. The method as in claim 62 wherein the first, second and additional pathways comprise terminal connections.